REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-9 are presently active in this case. Claims 1 and 7 are amended, and Claims 8 and 9 are added by the present amendment. Support for the amendment can be found at least at FIGs. 1(b)-3 and at page 7, line 26 through page 9, line 3 of the specification. Thus, it is respectfully submitted that no new matter is added.

Applicants and Applicants' representatives thank Examiner Gevell Selby and Primary Examiner Tuan Ho for the courtesies extended to Applicants' representatives during the personal interview conducted on December 15, 2004. During the personal interview, claims corresponding substantially to amended Claims 1 and 7 and new Claims 8 and 9 presented herewith were discussed in view of the cited references. Applicants respectfully note that dependent Claims 8 and 9 correspond to the Examiners' suggestion during the personal interview.

The outstanding Office Action objected to the title of the invention. The title is amended herewith to be, "Imaging Apparatus Including a Plurality of Photoelectric Transfer Devices." Accordingly, Applicants respectfully request the withdrawal of the objection to the title. Applicants also respectfully note that the specification is also amended to correct a minor informality.

Claims 1 and 7 were rejected under 35 U.S.C. § 102(b) as anticipated by Kimura (U.S. Patent No. 5,940,126). For the reasons discussed below, the Applicant traverses the anticipatory rejection.

Amended Claim 1 is directed to an imaging apparatus including an imaging device having a plurality of photoelectric transfer devices and imaging means for imaging an image

of a photogenic object on a surface of the imaging device. The imaging means images at least two images of the photogenic object onto different areas of the surface of the imaging device. Further, the imaging apparatus includes electrical signal processing means for *interleaving* the at least two images of the photogenic object into one integrated image of the photogenic object. Claim 7 is similarly amended to recite an electric signal processor configured to *interleave* at least three images of a subject to form an integrated image of the subject.

In a non-limiting exemplary embodiment, FIG. 1(b) illustrates an imaging apparatus including a signal arrangement converter 62 including a memory device. Electric signal intensity of one photoelectric transfer device composing the light-receiving surface of the imaging device is read according to an arrangement of photoelectric transfer devices (for example, $n_{1,1},\ldots,n_{x,1}$, $n_{1,2}$, $\ldots n_{x,2},\ldots,\ldots,n_{1,y},\ldots,n_{x,y}$ as shown in FIG. 2). As discussed during the personal interview, when the electric signals are written in and read out of a memory device of the signal arrangement converter 62, the electric signals are rearranged as $n_{1,1}$, $n_{(x/2)+1,1}$, $n_{1,(y/2)+1}$, $n_{(x/2)+1,(y/2)+1}$, $n_{2,1}$, $n_{(x/2)+2,1}$, $n_{2,(y/2)+1}$, $n_{(x/2)+2,(y/2)+1}$, $\cdots n_{x/2,1}$, $n_{x,1}$, $n_{x/2,(y/2)+1}$, $n_{x,(y/2)+1}$, $n_{1,2}$, $n_{(x/2)+1,2}$, $n_{1,(y/2)+2}$, $n_{(x/2)+1,(y/2)+2}$, $\cdots n_{x/2,y/2}$, $n_{x,y/2}$, $n_{x/2,y}$, $n_{x,y}$, thereby interleaving a plurality of images into one integrated image (see specification at page 8, lines 9-26).

Kimura describes a small video camera apparatus capable of imaging an object from various angles including first, second, and third lenses 201, 202, 203 for capturing images of the front, left, and right sides of an object (see Col. 4, line 64 – Col. 5, line 31). These images can be displayed on a monitor as shown in FIG. 4C. The Office Action asserts at page 3, lines 14-17) that the color separating and signal processing circuit 123 teaches Applicants' electric signal processing means. However, as described at Col. 4, lines 38-45, Kimura teaches that the color separating and signal processing circuit 123 executes a color signal

generating process and executes a *separation* of the images. Further, FIG. 4C shows entire left, front, and right images being displayed next to each other on a shared monitor. As discussed during the personal interview, juxtaposing whole images on a display is not patentably the same as Applicants' claimed *interleaving* at least two images into one *integrated* image. Thus, it is respectfully submitted that the color separating and signal processing circuit 123 of Kimura does not teach or suggest claimed electrical signal processing means or an electric signal processor.

Accordingly, Applicants respectfully request that the rejection of Claims 1 and 7 based on Kimura be withdrawn.

The outstanding Office Action also rejected Claims 1-3 and 6 under 35 U.S.C. § 103(a) as unpatentable over Igarashi in view of Katayama, et al. (U.S. Patent No. 6,632,172, herein "Katayama"). For the reasons discussed below, the Applicants traverse the obviousness rejections.

The Office Action notes at page 5, lines 8-10 that Igarashi does not disclose electric signal processing means. To remedy the noted deficiency, the Office Action asserts that the combination processing portion 18 of Katayama teaches Applicants' electric signal processing means. Katayama describes a double eye image pickup apparatus including a plurality of image pickup systems with fields thereof partially overlapping with each other. The invention of Katayama is described as removing a registration shift of overlapping areas during a combining process and taking into consideration occlusion areas (see Col. 2, lines 42-62). The invention of Katayama includes an aspect ratio conversion processing portion 10 (see FIG. 1) including an image combination processing portion 18 for producing an image from digital video signal stored in memories 111, 211, and 311 (see FIG. 1 and Col. 7, lines 33-36). The image combination processing portion 18 also smoothes seam lines between the

images 122, 222, and 320 to produce an aspect-ratio-converted image 400 (see FIGs. 11-13). However, as discussed during the interview, the combination processing portion 18 does not *interleave* images 122, 222, and 320 to produce an integrated image. Instead, similar to the case of Kimura, the image combination processing portion 18 simply combines whole images 122, 222, and 320 arranged next to each other to produce a wider image 400. Further, given the inventive objective of Igarashi to provide an endoscope apparatus with moderate parallax for use in medical applications (see Col. 1, line 12 – Col. 2, line 44), it is respectfully noted that applying the image processing of Katayama may adversely affect the performance of Igarashi's invention for its intended purpose by altering the image presented to an end user (see MPEP § 2143.01). Therefore, it is respectfully submitted that Katayama does not remedy the noted deficiencies with regard to Igarashi, and it is further noted that such a combination may render Igarashi unsatisfactory for its intended purpose.

Accordingly, in light of the discussed deficiencies in Igarashi and Katayama, Applicants respectfully request the withdrawal of the obviousness rejections of Claim 1.

Dependent Claims 2-6 are further considered allowable at least for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are not disclosed, taught, or suggested by the applied references when those features are considered within the context of Claim 1.

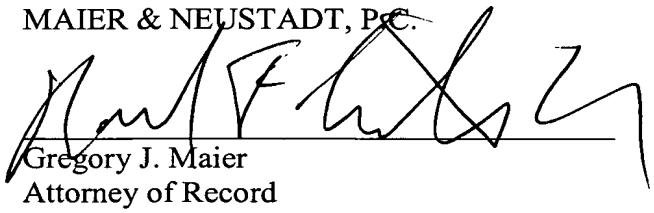
Newly added dependent Claims 8 and 9 recite features of the invention that are neither disclosed nor suggested by the references of record. For example, as discussed during the interview with regard to Claims 8 and 9, not one of Kimura, Katayama, or Igarashi, teach or suggest interleaving pixels of corresponding position. The new claims are supported by the original disclosure in substantially the same manner as the original claims. In particular,

support for Claims 8 and 9 can be found at least at page 8, lines 17-26. Accordingly, Applicants respectfully submit that new Claims 8 and 9 are allowable.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance, and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Raymond F. Cardillo Jr.
Registration No. 40,440

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)